

---

---

# **Earth Science Opportunities for Involvement through the Global Change Data and Information System**

---

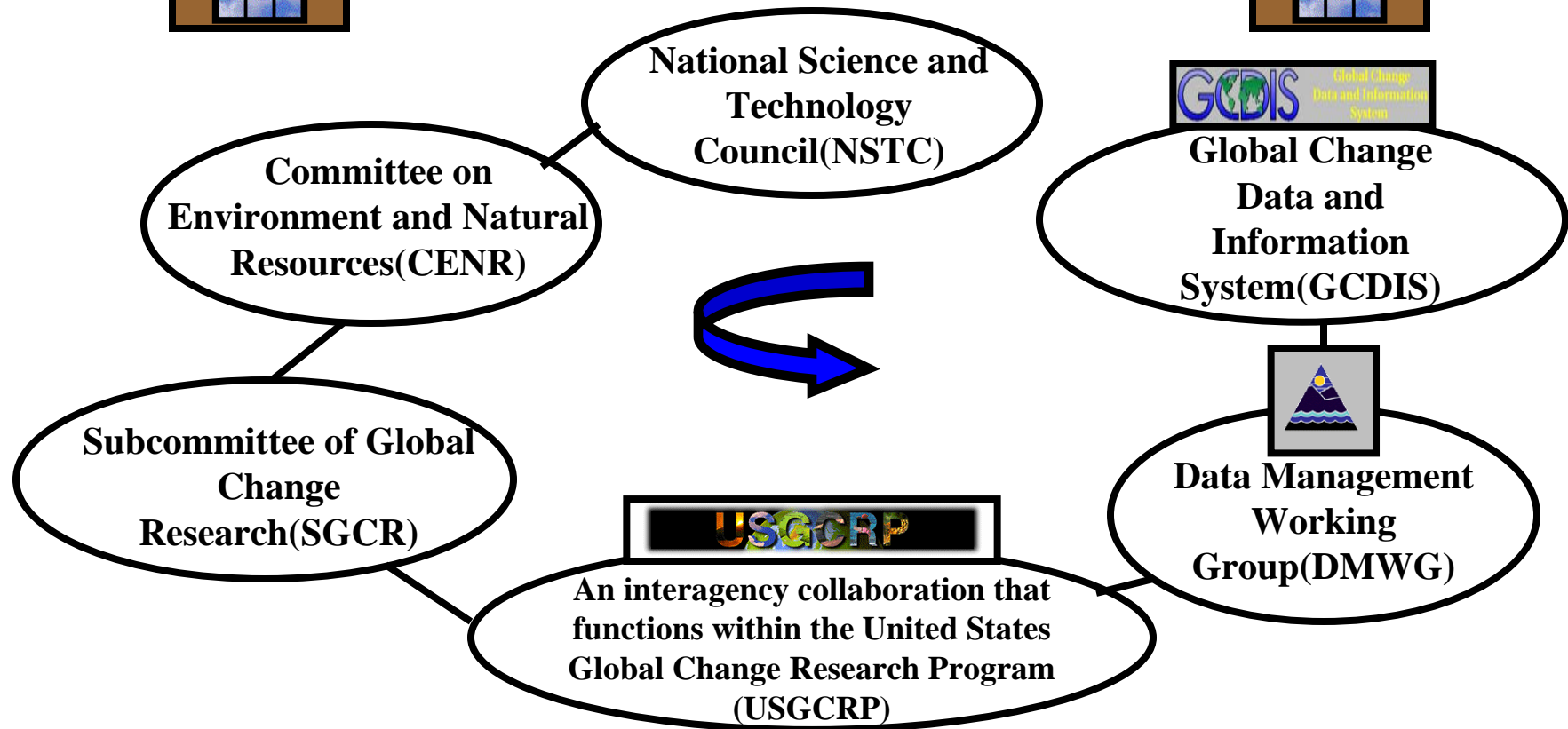
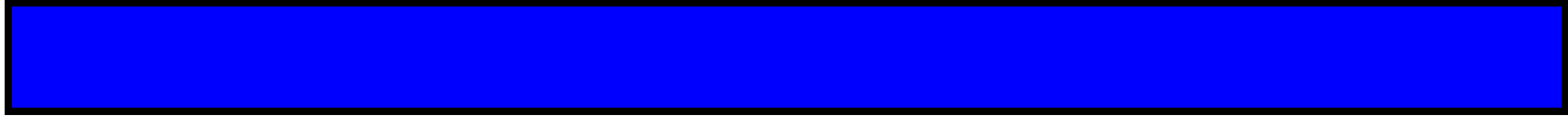
---

**Presented at the  
MU-SPIN Conference  
by**



**Lola M. Olsen  
NASA Goddard Space  
Flight Center  
September 23, 1999**





**What Does**



Global Change  
Data and Information  
System

**Offer?**



A data locator for the discovery of data sets worldwide through The Global Change Master Directory  
[<http://gcmd.nasa.gov>].



Support for the Global Change Research Information Office (GCRIO)  
[<http://www.gcrio.org>].



Answers to global change questions through “Ask Dr. Global Change”.

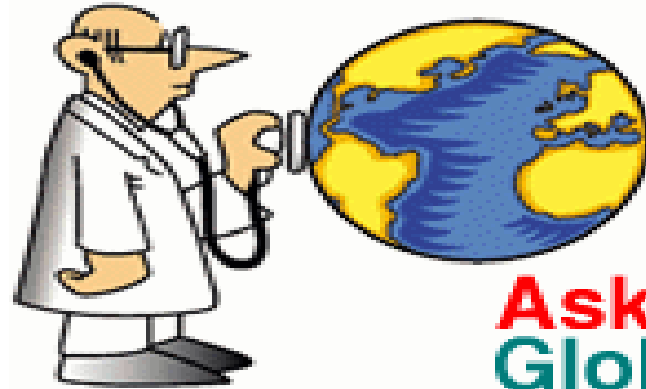
**USGCRP**

Information on current activities and publications of the USGCRP.

A video to describe its functions.



# Ask Dr. Global Change



help

**Ask Doctor  
Global Change**



**Who is Dr. Global Change?**



**Who can expect replies to questions  
asked of Dr. Global Change?**



**What depth of response can be expected?**



# Discovery of Data through the Global Change Master Directory (GCMD)



“A source of information about data sets available in Earth and environmental sciences.”

▶ The GCMD is based on the Directory Interchange Format. ◀

**The DIF**

The necessary set of fields to determine if a particular data set is a candidate for the desired application.

Multiple disciplinary capability.

Alive and evolving with new technology.

User and Author Input through the Interop Forum.

Multiple tools for input of data set information.

Multiple translations of metadata for alternative applications.





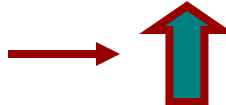
# Why use the Global Change Master Directory?



→ Quality Control (by multidisciplinary science staff)



→ Content held in relational database



→ Population = 7800+ and growing.



→ Handles data set “collections” through parent-child relationship.



→ NASA's Contribution to US Global Change Research Program's Data Management Working Group.



→ International participation through Committee on Earth Observation Satellites-CEOS : International Directory Network.





# Why use the Global Change Master Directory? (con't)



## Links

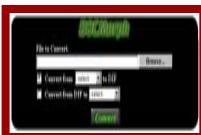
17,000 links within data sets  
633 ftp links  
New inventory capability through Related\_URL links  
1209+ links from Earth Science Pointers



## Multiple Interface Options



DIF Content and modifications handled through Interop Forum.









DOCmorph to “morph” content to/from multiple formats.



Well-worked keywords for science parameters, sources, sensors, locations, campaigns/projects, data centers.

Attention to standards.



-  Over 7800 Earth science data set descriptions from over 1000 data set providers now available through the IDN.
-  Science Keyword Search now primary interface (results may be refined by location, instrument, or platform); all keyword definitions available to users.
-  New JAVA-based Matrix Search Interface.
-  All new Subscription Service.
-  New Learning Center - with student resources, teacher resources, FAQs, and links to important data sets.
-  Improved Global Change Conference Calendar.











# New with GCMD's Version 7



-  “Add-A-Link” feature - to make it simpler to include information about available data sites.
-  New and modified fields for searching: addition of *Paleo\_Temporal\_Coverage* for paleoclimate and geological data; multiple roles within *Personnel* field; *Revision\_History* field; modifications to allow greater flexibility for input characters.
-  Enhancement of DOCmorph to handle transformations of metadata from one format to another in SGML.
-  Behind-the-scenes “streamlining” of code - providing opportunity for distributed metadata input by IDN.

## **IDN Task Team Objectives**

- ➡ Permit rapid and efficient discovery, identification, location of Earth science data.
- ➡ Share knowledge of data among CEOS participants to enhance collaborative work.
- ➡ Plan for enhanced interoperability among CEOS IDN nodes.





# Milestones



**December, 1999**



- Population goal:  
9000 DIFs.

**Spring, 2000**



-MD8 system design complete;  
-MD7 update - if needed.

**Fall, 2000**



- MD8 released.

**December, 2000**



- Population goal:  
12,000 DIFs.

**Spring, 2001**



- MD9 design  
completed.

**Fall, 2001**



- MD9 released.

**December, 2001**



- Population goal:  
18,000 DIFs.



# IDN Node Status



American Coordinating Node 

- MD7 packages available.

CONAE Cooperating Node 

(Argentina)

-Mirror (MD7 Isite)

NEONET Cooperating Node 

(Netherlands)

-Content Mirror

CCRS Cooperating Node 

(Canada)

-Content Mirror

INPE Cooperating Node 

(Brazil)

- Mirror (MD7 Isite)

JCADM Node 

(Antarctica)

- Mirror (in progress) -  
MD7 Isite

DLR Cooperating Node 

(Germany)

- Thesaurus Activity

CSIRO Node 

(Australia)

- DTD for DIF; coauthoring  
paper

UNEP Coordinating Node 

- Mirror (in progress) - MD7  
Oracle